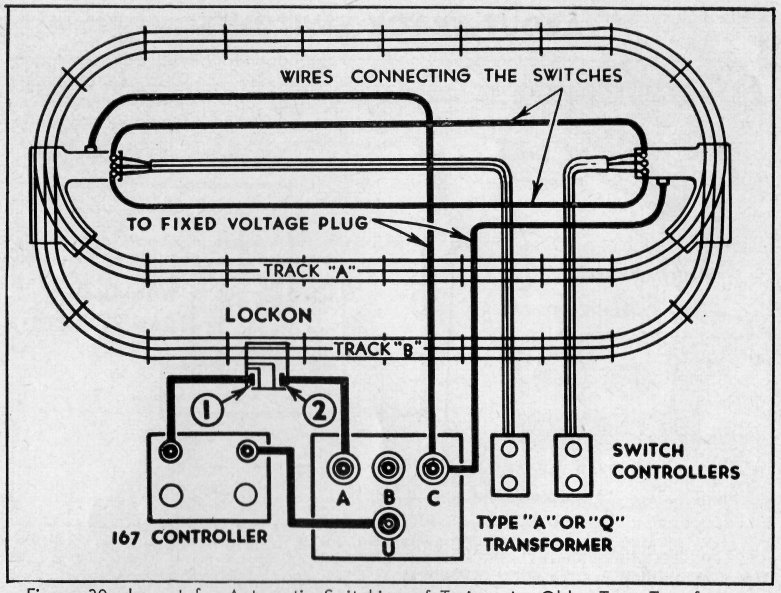

Figure 30—Layout for Automatic Switching of Train. An Older Type Transformer Is Illustrated to Show Use of 167 Whistle Controller

NON-DERAILING OPERATION

No. 022 switches have a built-in safety device which prevents train derailment. This device automatically throws the swivel rails to the correct position to accommodate an approaching train. Notice that two rails of the switch are insulated from the track by fibre pins, as shown in Figure 28. They are part of the non-derailing feature. Do not take them out or replace them by steel pins or the switch will not operate. Remove pins only from adjoining track sections; do not disturb the switch.

An interesting use of the non-derailing device is illustrated in Figure 30. If the outside posts of the switches are connected by wires as shown in Figure 30, the train will alternate automatically between tracks "A" and "B."

REVERSING SWITCH MOTOR

The position of the "motor" unit in 022 and 042 switches can be changed from one side to the other, if necessary for a particular layout. Remove the two mounting screws indicated by "A" in Figure 31 and detach motor unit from the switch. Insert the motor in position on the opposite side as shown by dotted line. Make sure that the driving pin is properly inserted in slot of the swivel rail and replace the mounting screws. When reversing 042 switch, change position of inside lamp wire.

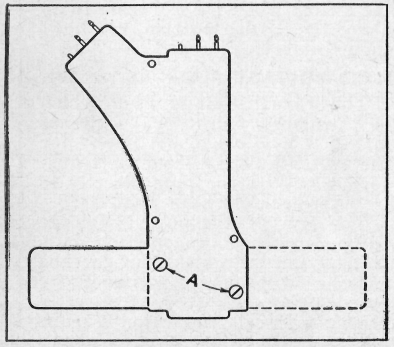

Figure 31—Reversing Switch Motor

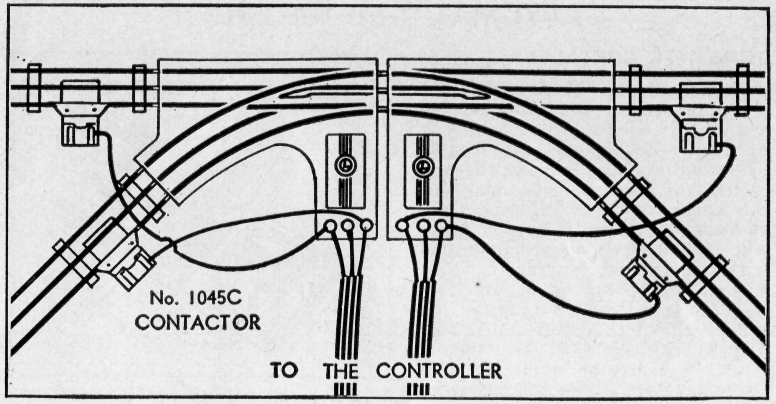

Figure 32—How to Connect No. 1121 Switches for Non-Derailing Operation

No. 1121 REMOTE CONTROL SWITCH

No. 1121 Switches are intended for use with "027" track. The procedure for installing these switches in the layout and connecting them to their controller is the same as for No. 022 Switches, described on preceding pages. No. 1121 Switches have no provision for supplying them with fixed voltage directly from the transformer, but draw their power from the track.

While No. 1121 Switches do not have a built-in non-derailing device, they can be made to operate automatically by a simple installation illustrated in Figure 32. Two No. 1045C Contactors are required for each switch. The contactors are clamped to straight track sections adjoining the two exit branches of the switch and are then connected to the terminals on the switch box, as shown in the diagram. Note that connectors clamped to the curved branches are wired to the right-hand switch terminals; those connected to straight-aways, to the left-hand terminals.

When proper connections are made, the wheels of the locomotive approaching an "open" switch automatically make the necessary electrical connection to throw the switch to correct position in order to prevent derailment. By varying the position and connection of contactors any switch in the layout can be made to operate automatically, opening and closing sidings and branch lines and routing trains according to a prearranged schedule.

No. 1024 and No. 042 MANUAL SWITCHES

Hand operated switches have no controllers or external wiring connections. They are inserted into the layout exactly as curved and straight track sections. The position of the swivel rail is changed by moving a hand lever. No. 1024 switches fit "027" track, No. 042 switches match the "O" and the "072" track.

Inexpensive and sturdy manual switches are particularly useful for infrequently used sidings, classification yards, etc., where remote control is not too important.